

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-9 and 11-22 are pending in this application. Claims 1-9, 11-13, 15, 19, and 21 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. patent 6,347,004 to Suzuki et al. (herein “Suzuki”). Claims 14, 16-18, 20, and 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Suzuki in view of U.S. patent 5,305,022 to Ota et al. (herein “Ota”).

Addressing the above-noted rejections, those rejections are traversed by the present response.

The claims as currently written recite that a lens on the side of an optical deflector has “a *negative* refracting power in sub-scanning direction” (emphasis added). That feature is believed to clearly distinguish over the applied art, as was not properly recognized in the Office Action.

The basis for the outstanding rejection relies on lens 22 in Suzuki to meet the above-noted claim limitation. However, Applicants submit the lens 22 in Suzuki has a *positive* power in the sub-scanning direction. Thus, that lens 22 does not meet the claim limitations of a “lens on the side of optical deflector thereof has a negative refracting power in sub-scanning direction”.

According to a book “Optics in Optical Device” written by Yoshisada Hayami, November 20, 1988, published by Optomechatronics Society, a focal length of a lens is calculated by the following formula:

$$\frac{1}{f} = (n - 1) \left( \frac{1}{r_1} - \frac{1}{r_2} \right) + \frac{(n - 1)^2}{n} \frac{d}{r_1 r_2}$$

in which:

r1 denotes an entrance surface curvature radius;

r2 denotes an exit surface curvature radius;

d denotes a lens thickness; and

n denotes lens refractive index.

According to Suzuki at the top of column 14, the radiiuses of curvatures Rs(0) are 100.91 (at the entrance side) and -76.40 (at the exit side); the lens thickness x is 18.00; and the lens refractive index n is 1.52441 for the lens 22.

Therefore, by substituting these values in the above-mentioned formula, the value 0.0020884 is obtained, which is a *positive* value.

From the above explanation it is clear that in Suzuki the lens 22 has a positive power in the sub-scanning direction, which is in contrast to the claim requirements for the corresponding lens to have a *negative* refracting power in the sub-scanning direction.

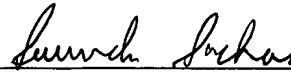
In such ways, the claims as currently written are believed to clearly distinguish over Suzuki.

Moreover, no teachings in Ota were cited with respect to the above-noted feature, nor are any teachings of Ota believed to cure the above-discussed deficiencies in Suzuki.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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